

## Some Schools' Examinations from Different Governorates

## 1 Cairo Governorate

Heliopolis Educational Zone



Answer the following questions :

## 1 Choose the correct answer :

[a]  $\{1, 2, 3\} \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )[b] The side length of a square is 10 cm. , then its area = ..... cm<sup>2</sup>  
( 100 or 50 or 40 or 200 )[c] If :  $X = \{x : x \in \mathbb{N}, 2 \leq x \leq 3\}$  , then :  $X = \dots$   
(  $\{2, 3\}$  or  $\{3\}$  or  $\{2\}$  )[d] Add 3 to the double of a number to get 19 = .....  
(  $x + 3 = 19$  or  $3x + 2 = 19$  or  $2x + 3 = 19$  )

## 2 Complete the following :

[a] The multiplicative neutral element in  $\mathbb{N}$  is .....[b]  $E \cap O = \dots$ [c] A circle whose radius length is 7 cm. , its circumference = ..... cm.  
( $\pi = \frac{22}{7}$ )[d] The perimeter of the equilateral triangle whose side length is  $x$   
= .....

## 3 [a] Determine the position of each of the following points in the coordinates plane : A (2 , 1) , B (5 , 1) , C (5 , 3) and D (2 , 3)

[b] If the age of a man now is  $x$  years where  $x \in \mathbb{N}$  , write :

(1) The age of the man since 8 years.

(2) The age of the man after 5 years.

## 4 [a] Using the properties of commutation , distribution and association , find the value of each of the following :

(1)  $37 + 81 + 63$ (2)  $519 \times 99$ [b] A circle , its diameter length is 7 cm. , find its circumference where ( $\pi = \frac{22}{7}$ )

## 5 [a] Find the area of a square in which its diagonal length is 12 cm.

[b] The following table shows the frequency distribution of the number of working hours of 50 workers :

Sets	4 -	6 -	8 -	10 -	Total
Frequency	12	8	16	14	50

Draw the frequency polygon which represent these data.

## Additional question

Complete :

[a] If :  $x + 8 = 15$  ,  $x \in \mathbb{N}$  , then :  $x = \dots$ 

[b] The number of axes of symmetry of the equilateral triangle is .....

[c] The area of a parallelogram whose base length is 8 cm. and height 2.5 cm. is ..... cm<sup>2</sup>

[d] 1 , 4 , 8 , 13 , ..... , ..... (in the same pattern)

## 2 Cairo Governorate

Ain Shams Educational Zone  
Helmiet El-Zaitoun E.L.S.

Answer the following questions :

## 1 Choose the correct answer :

[a] Add 6 to the number  $x$  , the symbolic expression is .....  
(  $6 - x$  or  $6x$  or  $x - 6$  or  $x + 6$  )[b] 25 .....  $\mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )[c] The square whose diagonal length is 8 cm. , its area = ..... cm<sup>2</sup>  
( 64 or 32 or 16 or 8 )[d] The circumference of a circle whose radius length is 14 cm.  
equals ..... cm. ( $\pi = \frac{22}{7}$ ) ( 14 or 22 or 44 or 88 )

## 2 Complete the following :

[a] The additive identity element in  $\mathbb{N}$  is .....

[b] The set of prime numbers which are less than 17 is .....

[c] The area of a triangle whose base length is 5 cm. and the corresponding height of it is 4 cm. = ..... cm<sup>2</sup>[d]  $6 \times 0 = \dots$

- 3 [a] Use the distributive property of multiplication over addition to complete :

$$50 \times 8 + 50 \times 7 = 50 \times (\dots + \dots) = 50 \times \dots = \dots$$

[b] If : A (2, 3) and B (8, 3), then find the length of  $\overline{AB}$

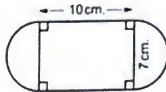
- 4 [a] By using the properties of addition and multiplication find :

(1)  $28 + 59 + 72 + 41$

(2)  $8 \times 137 \times 125$

[b] Calculate the perimeter of the opposite figure

where  $(\pi = \frac{22}{7})$



- 5 [a] Which is greater in area ?

A triangle whose base length is 12 cm. and its corresponding height = 8 cm. or a square of side length 7 cm.

[b] Represent the following distribution by frequency polygon :

Sets	5 -	7 -	9 -	11 -	13 -
Frequency	4	12	10	7	8

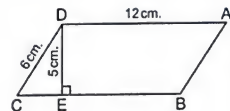
### Additional question

- [a] In the opposite figure :

ABCD is a parallelogram where AD = 12 cm. ,

CD = 6 cm. , ED = 5 cm. and  $\overline{ED} \perp \overline{BC}$

Find the area of the parallelogram.



- [b] Complete in the same pattern :

(1) 26, 20, 15, 11, ..... (2) 1, 3, 9, ..... , .....

### 3 Cairo Governorate

Heliopolis Educational Zone  
St. Joseph's School



Answer the following questions :

- 1 Complete :

[a] The set  $\{a : a \in \mathbb{N}, a < 2\}$  in the listing method = .....

[b] The circumference of a circle = .....  $\times$  diameter length

[c] The smallest natural number is .....

[d] The property used in :  $a \times (b \times c) = (a \times b) \times c$  is .....



- 2 Choose the correct answer :

[a] If we subtract 5 from the number  $x$ , we get .....

(  $4x$  or  $5-x$  or  $x-5$  or  $x+5$  )

[b]  $\frac{0}{2}$  .....  $\mathbb{N}$

(  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )

[c] The sum of two odd numbers is ..... number.

( an odd or a prime or an even )

[d] 99 added to the neutral element of multiplication in  $\mathbb{N}$  = .....

( 98 or 99 or 100 or 101 )

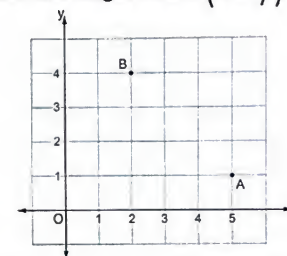
- 3 [a] Find the circumference of the circle of diameter length 14 cm.  $(\pi = \frac{22}{7})$

[b] In the opposite figure :

Write the coordinates

of each of the points

A and B



- 4 [a] Find the area of each :

(1) A triangle whose base length is 10 cm. and the corresponding height is 9 cm.

(2) A square of diagonal length 8 cm.

[b] Find using the properties of multiplication :  $915 \times 1001$

- 5 [a] If :  $a = 2$ ,  $b = 0$  and  $c = 3$ , find the value of :  $3 \times a + 9 \times b - c$

[b] The following table shows the marks of some pupils in mathematics :

Marks	10 -	20 -	30 -	40 -	Total
Frequency	7	8	10	5	30

Graph these data using the frequency polygon.

### Additional question

[a] Graph the following figure : A (1, 2), B (5, 2) and C (3, 7), then draw its line of symmetry.

[b] Complete in the same pattern :

(1) 1, 4, 9, 16, ..... (2) 3, 9, 27, ..... , .....



## 4 Cairo Governorate

Al-Khalifa and Al-Mokatem Educational Zone  
Al-Holmia Experimental Language School

Answer the following questions :

## 1 Complete :

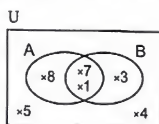
- [a] The additive neutral element in  $\mathbb{N}$  is .....
- [b] The radius length of the circle whose diameter length is 8 cm. = .....
- [c] If :  $5x = 20$  , then :  $x =$  .....
- [d]  $0.2753 \approx$  ..... (to the nearest hundredth)
- [e] The circumference of a circle =  $\pi \times$  .....
- [f] If :  $A \subset B$  , then :  $A \cap B =$  .....
- [g]  $8 \times (14 - 4) = 8 \times$  .....
- [h] If :  $Y = \{x : x \in \mathbb{N}, 1 < x < 5\}$  , then :  $Y =$  ..... (in the listing method)

## 2 Choose the correct answer :

- [a] The triangle has ..... altitudes. ( 1 or 2 or 3 or 4 )
- [b] The sum of any two natural numbers .....  $\mathbb{N}$   
(  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )
- [c]  $13.56 \div 100 =$  .....  
( 1356 or 0.1356 or 13560 or 135.6 )
- [d]  $\mathbb{N} \cap \mathbb{N} =$  ..... (  $\emptyset$  or  $\mathbb{N}$  or 0 or  $\{0\}$  )
- [e] If :  $a = 4$  , then :  $a - 1 =$  ..... ( 4 or 1 or 5 or 3 )
- [f] The area of a triangle = .....  $\times$  base length  $\times$  the corresponding height  
( 2 or 3 or half or 4 )
- [g] The sum of two numbers is 7 , one of them is  $x$  , then the other = ..... (  $7 + x$  or  $7 - x$  or  $x - 7$  or  $7x$  )
- [h]  $20 \text{ dm.}^2 =$  .....  $\text{cm.}^2$  ( 20 or 200 or 2000 or 2 )

3 [a] Using the opposite Venn digram ,  
list each of the following sets :

- (1)  $U$   
(2)  $A \cap B$   
(3)  $B - A$



## [b] Using the properties of addition to find the value of :

$$32 + 47 + 68 + 3$$



## 4 [a] Find the result of :

(1)  $3\,968 + 124$

(2)  $7.21 \times 1000$

## [b] Find the area of the square whose diagonal length is 14 cm.

## 5 [a] Use the distributive property find the value of :

$217 \times 18 + 217 \times 82$

## [b] In the opposite figure :

The length of the diameter  $\overline{AB}$   
of a semicircle is 10 cm.

Find the distance around the figure ( $\pi = 3.14$ )

## Additional question

## [a] The lengths of the diagonals of a rhombus are 14 cm. and 10 cm.

Calculate its area.

## [b] Solve each of the following equations :

(1)  $3x - 5 = 16, x \in \mathbb{N}$

(2)  $x + 2 = 2, x \in \mathbb{N}$

## 5 Cairo Governorate

El-Nozha Directorate of Education  
Math Department

Answer the following questions :

## 1 Complete each of the following :

- [a] For  $a \in \mathbb{N}, b \in \mathbb{N}$  , then :  $a \times b$  .....  $\mathbb{N}$
- [b]  $23 \times (92 + 8) = 23 \times$  ..... = .....
- [c] The set of natural numbers less than 5 is .....
- [d] The sum of 2 numbers is 21 , if one of them is  $x$  , then the other is .....
- [e] The side length of a square is 10 cm. , then its area is .....

## 2 Choose the correct answer :

- [a] The set of even numbers ..... the set of natural numbers  
(  $\subset$  or  $\in$  or  $\not\subset$  or  $\notin$  )
- [b] The base length of a triangle is 8 cm. , its corresponding height is 5 cm.  
, then its surface area = ..... ( 40 cm. or  $40 \text{ cm.}^2$  or  $20 \text{ cm.}^2$  )

[c] If :  $X = \{x : x \in \mathbb{N}, 3 \leq x < 5\}$ , then :  $X = \dots\dots\dots$   
 ( {4} or {3} or {3, 4} or {4, 5} )

[d] The longest chord in a circle is 7 cm. , then the circumference of the circle is ..... cm. ( $\pi = \frac{22}{7}$ ) ( 3.5 or 7 or 22 or 44 )

3 [a] In a 2-dimensional coordinate plane , locate the points :  
 A (5 , 0) , B (9 , 0) , C (9 , 4) and D (5 , 4) , then write the name of the shape ABCD

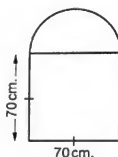
[b] Use the commutative and associative properties in  $\mathbb{N}$  to calculate :  
 $872 + 199 + 128 + 801$

4 [a] If the age of a man now is  $x$  years where  $x \in \mathbb{N}$  , find his age after 7 years.

[b] In the opposite figure :

A window in the form of a square of side length 70 cm. and above it a semicircle.

Calculate the perimeter of the window.



5 The following table shows the marks of 40 pupils in a math exam :

Sets	10 –	20 –	30 –	40 –	50 –	Total
Frequency	5	7	12	A	7	40

[a] Find the value of A

[b] Draw the histogram and the frequency polygon which represent these data.

### Additional question

The following table shows the number of visitors of the museum in four days :

Day	First	Second	Third	Fourth
Number	100	100	200	400

Represent these data by a pie graph.



## 6 Cairo Governorate

El Waili Educational Directorate  
 Notre Dame des apotres School



Answer the following questions :

1 Complete :

[a] ( $\dots\dots\dots \times 3$ )  $\times 28 = 10 \times (3 \times 28)$

[b] The additive neutral element in  $\mathbb{N}$  is .....

[c] If :  $5K = 40$  , then :  $K = \dots\dots\dots$

[d] The area of the square whose diagonal length is 10 cm. = ..... cm<sup>2</sup>

2 Choose the correct answer :

[a]  $5 - 7 \dots\dots\dots \mathbb{N}$  ( $\subset$  or  $\in$  or  $\not\subset$  or  $\notin$ )

[b] If the sum of two numbers  $x$  and  $y$  is 20 , then :  $y = \dots\dots\dots$

(  $20 + x$  or  $20 - x$  or  $x - 20$  or  $\frac{x}{20}$  )

[c] A circle of radius 3.5 cm. long , then its circumference

= ..... cm. ( $\pi = \frac{22}{7}$ ) ( 7 or 11 or 22 or 44 )

[d] The square whose diagonal length is 8 cm. , then its area

= ..... cm<sup>2</sup> ( 64 or 32 or 16 or 9 )

3 [a] Use the properties of commutative and association in  $\mathbb{N}$  to find the result of :

$872 + 199 + 128 + 801$

[b] Complete : If :  $x - 5 = 19$  , where  $x \in \mathbb{N}$  , then :  $x = \dots\dots\dots$

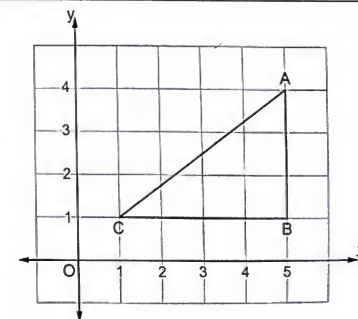
4 In the opposite figure :

Find :

[a] The coordinates of A

[b] The distance between A and B

[c] The area of  $\triangle ABC$






The diagram shows a composite figure. It consists of a rectangle with a semicircle attached to its top side. The rectangle's height is labeled as 70 cm on the left side. The rectangle's width is labeled as 70 cm at the bottom. The semicircle's diameter is equal to the width of the rectangle, which is 70 cm.

<b>Sets</b>	10 –	20 –	30 –	40 –	<b>Total</b>
<b>Frequency</b>	10	12	18	10	<b>50</b>

### Additional question

**Choose the correct answer :**

[a] A rhombus in which the length of its diagonals are 10 cm. and 12 cm.  
its area = ..... cm<sup>2</sup> ( 120 or 60 or 24 or 32 )

[b] The opposite figure :  represents .....  
( reflection or translation or rotation )

[c] The number of axes of symmetry of the rectangle = .....  
( 0 or 1 or 2 or 4 )

[d] If :  $3x = 45$ ,  $x \in \mathbb{N}$ , then :  $x =$  ..... ( 42 or 48 or 5 or 15 )

**[a]** A rhombus in which the length of its diagonals are 10 cm. and 12 cm.  
 , its area = ..... cm<sup>2</sup> ( 120 or 60 or 24 or 32 )

[c] The number of axes of symmetry of the rectangle = .....  
( 0 or 1 or 2 or 4 )

[d] If :  $3x = 45$ ,  $x \in \mathbb{N}$ , then :  $x = \dots\dots\dots$  ( 42 or 48 or 5 or 15 )

**Dokki Educational Directorate**  
**Modern Narmer Language School**

[a] The additive neutral element in  $\mathbb{N}$  is .....

**[b]**  $\mathbb{N} - \{0\} = \dots\dots\dots$

**[c]** If  $x$  is an even number, then  $x + 2$  is an ..... number.

[d] If :  $945 = (x \times 100) + 45$  , then :  $x = \dots\dots\dots$

[e]  $25 \times 101 = 25 \times (\dots\dots\dots + \dots\dots\dots)$

[a] An odd number + an odd number = ..... number.

( an odd **or** an even **or** a prime )

$$EUO = \dots\dots\dots (\{2\} \text{ or } \{2, 5\} \text{ or } 0 \text{ or } \mathbb{N})$$

[c]  $(48 \div 9) \dots\dots\dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )

**[d]** The diameter length of a circle whose circumference is 44 cm.

$$= \dots\dots\dots \text{ cm. } \left( \pi = \frac{22}{7} \right) \quad (28 \text{ or } 21 \text{ or } 14 \text{ or } 7)$$

**[e]** The square whose diagonal is 8 cm. long , its area = .....  $\text{cm}^2$ .

( 8 or 16 or 32 or 64 )

**3** [a] In a 2-dimensional coordinate plane, graph the points A (3, 0), B (0, 4), C (3, 8) and D (6, 4), then join them.

**What is the name of this shape ?**

**[b] Calculate using commutative, associative and distributive properties :**

(1)  $25 \times 65 \times 4$

(2)  $35 \times 40 + 65 \times 40$

(3)  $192 + 488 + 308 + 12$

**4** [a] Write the mathematical expression for each of the following :

(1) 5 is subtracted from twice a number.

(2) The quotient of a number and 5 is increased by 2

(3) Four times a number decreased by 2 is 10

**[b] Find the area of a triangle whose base is 20 cm. long and its corresponding height is 9 cm. long.**

**5** [a] Find the circumference of a circle whose radius length is 14 cm. ( $\pi = 3.14$ )

[b] *The following table represents the frequency distribution of the marks of a group of students in an exam :*

Sets	10 –	20 –	30 –	40 –	50 –	60 –	Total
Number of students	7	9	13	10	6	5	50

Draw the frequency polygon of this distribution.

**Additional question**

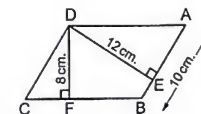
The opposite figure ABCD is a parallelogram ,  
 $AB = 10$  cm. ,  $DE = 12$  cm. ,  $DF = 8$  cm. **Find :**

- (1) The area of the parallelogram ABCD
- (2) The length of  $\overline{BC}$

The opposite figure ABCD is a parallelogram ,  
 $AB = 10$  cm. ,  $DE = 12$  cm. ,  $DF = 8$  cm. **Find :**

(1) The area of the parallelogram ABCD

(2) The length of  $\overline{BC}$



## 8 Giza Governorate

El-Haram Educational Directorate  
Orman Modern School

Answer the following questions :

## 1 Complete :

- [a] The set of even number (E) – the set of odd number (O) = .....
- [b] The multiplicative neutral element in  $\mathbb{N}$  = .....
- [c] Shorouk saved  $x$  pounds , her father gave her 10 pounds , then she has .....
- [d]  $a + b = b + \dots$
- [e] The smallest counting number is .....
- [f] The side length of a square is 10 cm. , then its area = .....

## 2 Choose the correct answer :

- [a]  $3 + 9 \dots \mathbb{N}$  ( $\subset$  or  $\not\subset$  or  $\in$  or  $\notin$ )
- [b] Twice the number  $x$  subtracted 3 from it = .....  
( $x-3$  or  $2x+3$  or  $2x-3$  or  $3-2x$ )
- [c] The circle whose diameter length is 14 cm. , its circumference = ..... cm. (55 or 44 or 66 or 77)
- [d] If :  $X = \{x : x \in \mathbb{N} \ 2 \leq x \leq 3\}$  , then :  $X = \dots$   
( $\{3, 2\}$  or  $\{3\}$  or  $\{2\}$  or  $\emptyset$ )
- [e]  $\frac{0}{5} = \dots$  (0 or 1 or 5 or 50)
- [f]  $\{2, 3, 0, 4\} \dots \mathbb{N}$  ( $\subset$  or  $\not\subset$  or  $\in$  or  $\notin$ )

## 3 Which is greater in area ?

A square whose diagonal length is 10 cm. or a triangle in which its base length is 8 cm. and its corresponding height is 12 cm.

4 Use the operation properties in  $\mathbb{N}$  to calculate :

- [a]  $8 \times 137 \times 125$  [b]  $28 + 59 + 72$

## 5 [a] Represent the following set on the number line :

The set of natural numbers less than 5

[b] Represent the following data by a histogram and a frequency polygon :

Sets	10 –	20 –	30 –	40 –	50 –	60 –	Total
Frequency	5	9	13	10	7	4	48



## Additional question

- [a] On the cartesian coordinates plane , determine the points :  
A (2 , 2) , B (5 , 2) , C (5 , 8) and D (2 , 8) If  $\overline{BC}$  is the axis of reflection of the figure ABCD , then determine the image of the figure ABCD
- [b] Solve each of the following equations in  $\mathbb{N}$  :  
(1)  $\frac{1}{6}x - 4 = 2$  (2)  $2x + 9 = 21$

## 9

## Giza Governorate

Maths Inspection



Answer the following questions :

## 1 Complete :

- [a] The additive neutral element in  $\mathbb{N}$  is .....
- [b] If :  $X = \{x : x \in \mathbb{N} , 4 < x < 6\}$  , then :  $X = \dots$
- [c] The probability of the impossible event = .....
- [d]  $\frac{\text{The circumference of the circle}}{\text{The length of its diameter}} = \dots$
- [e]  $3.214 \approx \dots$  (to the nearest  $\frac{1}{100}$ )

## 2 Choose the correct answer :

- [a]  $\{\frac{1}{3}, 1, 2\} \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )
- [b] The number of the altitudes of any triangle = .....  
(4 or 1 or 3 or 2)
- [c] The multiplicative neutral element in  $\mathbb{N}$  is .....  
(1 or 0 or 2 or 3)
- [d]  $\mathbb{N} - \mathbb{C} = \dots$  ( $\{1\}$  or  $\{0\}$  or  $\mathbb{N}$  or  $\emptyset$ )
- [e] The probability of the certain event = .....  
(2 or 1 or 0 or 3)

3 [a] Use the commutative and associative properties in  $\mathbb{N}$  to find the value of :  $38 + 20 + 62$ 

- [b] If :  $X = \{1, 2, 3, 5\}$  and  $Y = \{4, 5\}$  , then find :  
(1)  $X \cup Y$  (2)  $X \cap Y$



- 4 [a] If the price of 25 metres of cloth is L.E. 62.5 , what is the cost of one metre ?

[b] A square whose side length is 5 cm. Calculate its area.

- 5 Represent the following data by a frequency polygon :

Sets	5 -	10 -	15 -	20 -	25 -
Frequency	4	9	12	7	2

### Additional question

[a] Find the area of the rhombus of side length 8 cm. and its height is 10 cm.

[b] Solve in  $\mathbb{N}$ :

(1)  $x - 3 = 7$

(2)  $3x + 9 = 15$

## 10 Alexandria Governorate

East Educational Zone  
Supervision of Maths



Answer the following questions :

- 1 Choose the correct answer :

[a]  $\{2, 3, 0.4\}$  .....  $\mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\supset$ )

[b] The smallest natural number is .....

(0 or 1 or 2 or 3)

[c] Subtracting 3 from the double of the number  $x =$  .....

( $x - 3$  or  $2x - 3$  or  $3x + 2$  or  $3x$ )

[d] A triangle of base length 7 cm. and its corresponding height is 4 cm. , then its area = .....  $\text{cm}^2$  (28 or 14 or 11)

- 2 Complete :

[a] Add 4 to the number  $y =$  .....

[b] A circle of radius length 5 cm. , then its diameter length = ..... cm.

[c] The multiplicative identity element is .....

[d]  $23 + 35 =$  ..... + 23 (..... property)

- 3 [a] If the radius length of a circle is 7 cm. Find its circumference.

[b] Use the properties of addition and multiplication to solve :

(1)  $156 + 871 + 344 + 129$  (2)  $4 \times 17 \times 25$



- 4 [a] Find the area of the square whose diagonal length is 10 cm.

[b] In two dimensional coordinates , plot the points A (2 , 5) , B (5 , 2) and C (5 , 8) , then name the figure.

- 5 [a] Complete :

(1) Area of triangle =  $\frac{1}{2} \times$  .....  $\times$  .....

(2) The sum of what Manal and Noha have is 10 pounds , if Manal has  $x$  pounds , then Noha has ..... pounds.

[b] The following table shows the number of working hours of 50 workers :

Sets	4 -	6 -	8 -	10 -
Frequency	10	8	12	14

Represent these data by a frequency polygon.

### Additional question

The following table represents the production of a factory for 4 kinds of electric sets in a month :

The kind of the set	TV	Washing machine	Heater	Oven	Total
The number of sets	50	100	25	.....	200

[a] Complete the table.

[b] Represent these data by a pie graph.

## 11 Alexandria Governorate

Central Zone of Education  
EGC



Answer the following questions :

- 1 Complete :

[a] The multiplicative neutral element in  $\mathbb{N}$  is .....

[d] The least number in the set of counting numbers is .....

[c] If :  $X = \{x : x \in \mathbb{N}, 1 \leq x \leq 6\}$  , then :  $X =$  .....

[d] The length of the diagonal of a square is 12 cm. , then its area = .....  $\text{cm}^2$

**2 Choose the correct answer :**

- [a]  $(3 + 9) \dots \mathbb{N}$  ( $\subset$  or  $\not\subset$  or  $\in$  or  $\notin$ )  
 [b] If :  $m - 3 = 9$ , then :  $m = \dots$  (6 or 12 or 27 or 15)  
 [c] The length of the base of a triangle is 10 cm. and its corresponding height is 4 cm. , then its area = .....  
 (40 cm. or 40 cm<sup>2</sup> or 20 cm. or 20 cm<sup>2</sup>)  
 [d] A circle of diameter length 7 cm. , then its circumference = ..... cm. ( $\pi = \frac{22}{7}$ ) (3.5 or 7 or 22 or 44)

**3 [a] Which is greater in area ?**

A square whose diagonal is 10 cm. long or the right-angled triangle in which the lengths of the sides of the right angle are 15 cm. and 8 cm.

[b] Using the properties of commutation , association and distribution in  $\mathbb{N}$  , find the result of the following (write the used property) :

- (1)  $4 \times 31 \times 25$  (2)  $42 + 79 + 58$

**4 In the orthogonal cartesian coordinates , locate the points :**

A (9 , 3) , B (4 , 3) , C (4 , 7) and D (9 , 7) , then complete :

- [a] The length of  $\overline{AB}$  = ..... units.  
 [b] The length of  $\overline{BC}$  = ..... units.  
 [c] The figure ABCD is called .....  
 [d] The perimeter of the figure ABCD = ..... units.

**5 [a] Write the symbolic expression for each situation :**

- (1) Subtract 5 from the double of the number y  
 (2) Add 7 to three times of the number z

[b] The following table shows the frequency distribution of the number of working hours of 50 workers :

Sets	4 -	6 -	8 -	10 -	Total
Frequency	12	8	16	14	50

Draw the frequency polygon that represents these data.



**Additional question**

Match :

- [a] If :  $5x = 10$  ,  $x \in \mathbb{N}$  , then :  $x = \dots$  (1) 1  
 [b] The number of axes of symmetry of the isosceles triangle is ..... (2) 40  
 [c] The area of the rhombus of side length 10 cm. and height 4 cm. = ..... cm<sup>2</sup> (3) 14  
 [d] 6 , 8 , 10 , 12 , ..... (in the same pattern) (4) 2

**12 Alexandria Governorate**

West Educational Administration  
Mathematics Supervision



Answer the following questions :

**1 Choose the correct answer :**

- [a]  $(3 + 9) \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )  
 [b] Twice the number  $x$  subtracted 3 from it = .....  
 ( $x - 3$  or  $2x + 3$  or  $2x - 3$  or  $3 - 2x$ )  
 [c] If  $x$  is an odd number , then  $x + 2$  is .....  
 (an even or an odd or a prime)  
 [d] The circumference of the circle = .....  
 ( $\pi r$  or  $2\pi r$  or  $3\pi r$  or  $4\pi r$ )

**2 Complete the following :**

- [a] The area of the square = .....  
 [b] Area of rectangle whose dimensions are 4 cm. and 9 cm. = .....  
 [c] If :  $x + 8 = 15$  ,  $x \in \mathbb{N}$  , then :  $x = \dots$   
 [d]  $32 + (\dots + 59) = (32 + 68) + \dots$

**3 [a] Using the properties of multiplication in  $\mathbb{N}$  to find the following :**

$$8 \times 137 \times 125$$

[b] Find the area of triangle whose the length of its base is 8 cm. and its corresponding height equals 5 cm.

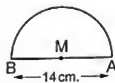


4 [a] The age of a man is  $x$  years where  $x \in \mathbb{N}$ , find :

- (1) The age of the man after seven years.  
(2) The age of the man since 10 years.

[b] Find the area of the square whose diagonal length is 8 cm.

5 [a] Calculate the perimeter of the opposite figure where  $AB = 14$  cm.



[b] Represent the following data by a frequency polygon.

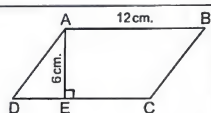
Sets	10 –	20 –	30 –	40 –	Total
Frequency	8	12	10	5	35

### Additional question

[a] From the opposite figure :

Find the area of the parallelogram ABCD

[b] Solve the equation :  $2x + 9 = 21$  where  $x \in \mathbb{N}$



## 13 El-Kalyoubia Governorate

Maths Supervision



Answer the following questions :

1 Choose the correct answer :

- [a] If :  $x + 7 = 19$ ,  $x \in \mathbb{N}$ , then :  $x =$  .....  
( 12 or 11 or 20 or 13 )
- [b] The multiplicative neutral element in  $\mathbb{N}$  is .....  
( 2 or 1 or zero or 10 )
- [c]  $9 + 2$  .....  $\mathbb{N}$  (  $\in$  or  $\subset$  or  $\notin$  or  $\not\subset$  )
- [d] Twice the number  $x$  subtracted 3 from it = .....  
(  $2x - 3$  or  $x - 3$  or  $3 - 2x$  or  $2x + 3$  )

2 Complete :

- [a] The area of a square with diagonal length 8 cm. is .....  $\text{cm}^2$   
[b]  $(24 \times \dots) \times \dots = 24 \times (K \times N)$



[c] The circumference of a circle with diameter length 7 cm. is ..... cm.

$$(\pi = \frac{22}{7})$$

[d] The smallest natural number is .....

3 Using the properties in  $\mathbb{N}$  to find the result of :

[a]  $79 + 36 + 21 + 64$  [b]  $4 \times 17 \times 25$

4 [a] Using distribution property to find the value of :  $25 \times 40 + 25 \times 60$

[b] Find the area of the triangle whose base length is 6 cm. and its corresponding height is 4 cm.

5 [a] Complete : The number of axes of symmetry of a square = .....

[b] Represent the following distribution by a frequency polygon :

Set	0 –	4 –	8 –	12 –
Frequency	8	12	6	10

### Additional question

[a] On a coordinate plane, draw the triangle ABC in which A (4, 5), B (6, 5) and C (4, 2), then draw its image by reflection in  $\overline{AB}$

[b] Solve each of the following equations in  $\mathbb{N}$  :

(1)  $2x - 9 = 11$  (2)  $x + 3 = 6$

## 14 El-Sharkia Governorate

Directorate of Education  
Experimental Schools Directory



Answer the following questions :

1 Choose the correct answer :

- [a]  $\frac{3}{4}$  .....  $\mathbb{N}$  (  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )
- [b]  $\{2, 4, 6\}$  .....  $\mathbb{N}$  (  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )
- [c] If  $x$  is an odd number, then  $x + 2$  is .....  
( an odd or an even or a prime )
- [d] If the base length of triangle is 8 cm. and its corresponding height is 5 cm., then its area is .....  
( 40 cm. or  $40 \text{ cm}^2$  or 20 cm. or  $20 \text{ cm}^2$  )

**2 Complete the following :**

- [a] If side length of a square is 10 cm. , then its area = ..... cm<sup>2</sup>  
 [b] The smallest natural number is .....  
 [c] The circumference of a circle with radius 7 cm. and  $\pi = \frac{22}{7}$  is .....  
 [d] The multiplicative neutral element in  $\mathbb{N}$  is .....

**3 Find the result using properties of addition and multiplication in  $\mathbb{N}$  :**

- [a]  $46 + 39 + 54$  [b]  $4 \times 17 \times 25$   
 [c]  $19 \times 64 + 19 \times 36$  [d]  $101 \times 29$

**4 [a] If the diagonal length of a square is 6 cm. Find its area ?**

- [b] Find the length of diameter of a circle if its circumference is 88 cm. and  $\pi = \frac{22}{7}$

**5 The following table shows the marks of 28 students in maths exam in a month :**

Sets	10 –	20 –	30 –	40 –
Frequency	6	9	8	5

Draw the frequency polygon which represent the given data.

**Additional question**

**Which is greater in area ?**

A rhombus in which the lengths of its diagonals are 6 cm. and 8 cm.  
 or a parallelogram in which the length of its base is 10 cm. and the corresponding height is 5 cm. , then calculate the difference between them.

**15 El-Monofia Governorate**

Tala Educational Directorate  
Maths Supervision



Answer the following questions :

**1 Choose the correct answer :**

- [a] The sum of two natural numbers .....  $\mathbb{N}$   
 (  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )  
 [b] The sum of two numbers is 20 , if one of them is  $x$  , then the other  
 = ..... (  $20 + x$  or  $20 - x$  or  $x - 20$  or  $\frac{x}{20}$  )



- [c] The circumference of a circle of radius length 10 cm. is .....  $\pi$  cm.  
 ( 31.4 or 62.8 or 10 or 20 )  
 [d]  $x - 18$  .....  $x - 17$  where  $x$  is a natural number greater than 20  
 (  $>$  or  $<$  or  $=$  or  $\geq$  )

**2 Complete each of the following :**

- [a] 99 added to the multiplicative neutral element in  $\mathbb{N}$  = .....  
 [b]  $78 + 49 = 49 + \dots$  ( ..... property )  
 [c] If we subtract 8 from twice the number  $x$  , then we shall get  
 the number .....  
 [d]  $6 + 20 \div 4 \times 5 = \dots$

**3 [a] Use the properties of addition and multiplication to find the result :**

- (1)  $973 + 299 + 227 + 901$  (2)  $95 \times 101$

- [b] Write the following set in the listing method and represent it on the number line :  $X = \{x : x \in \mathbb{N}, x < 5\}$

**4 [a] Which is greater in area ?**

A square whose diagonal length is 10 cm. or a triangle in which the length of its base 15 cm. and the length of the corresponding height 8 cm.

- [b] On the 2-dimensional coordinate plane , draw the triangle  $\triangle ABC$  where  $A(3, 5)$  ,  $B(6, 5)$  and  $C(3, 2)$  , then find the lengths of  $\overline{AC}$  and  $\overline{AB}$

**5 The following table shows the marks of 50 pupils in maths exam :**

Sets	10 –	20 –	30 –	40 –	Total
Frequency	10	12	18	10	50

Represent these data by the histogram and the frequency polygon.

**Additional question**

The following table shows the favourite games for 20 pupils :

Game	Football	Basketball	Volleyball
Number	10	5	5

Represent these data using a pie graph.



# 16 El-Monofia Governorate

Sirs El-Lian Experimental School



Answer the following questions :

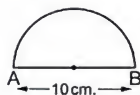
## 1 Choose the correct answer :

- [a] A square in which the length of its diagonal = 10 cm.  
its area = ..... cm<sup>2</sup> ( 100 or 50 or 75 or 80 )
- [b] 9 is subtracted from the double of the number  $x$  = .....  
(  $9 - 2x$  or  $2x - 9$  or  $9x + 2$  or  $18x$  )
- [c] The circumference of a circle whose  $r = 14$  cm. and  $(\pi = \frac{22}{7})$  equals ..... cm.  
( 22 or 44 or 66 or 88 )
- [d] If  $P$  is the set of prime numbers , then :  $P$  .....  $\mathbb{N}$   
(  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )

## 2 [a] Complete :

- (1)  $64 + (63 + \dots) = (64 + \dots) + 35 = \dots + 35 = \dots$
- (2) The smallest natural number is .....

## [b] In the opposite figure :

The length of  $\overline{AB}$  of semicircle is 10 cm.Find the distance around the figure. ( $\pi = 3.14$ )3 [a] Use the distributive property to find :  $23 \times 46 + 23 \times 54$ [b] Using the properties in  $\mathbb{N}$  to find the result of :

- (1)  $8 \times 17 \times 125$  (2)  $77 + 36 + 23 + 64$

## 4 [a] Find the area of a triangle whose base length = 12 cm. and its corresponding height = 9 cm.

## [b] Complete :

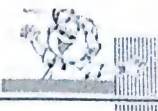
- (1)  $E \cap \mathbb{N} = \dots$  (where  $E$  is the set of even numbers)
- (2)  $\mathbb{N} - O = \dots$  (where  $O$  is the set of odd numbers)

## 5 [a] Complete :

- (1) The multiplicative identity in  $\mathbb{N}$  added to 99 equals .....
- (2) The set of natural numbers less than or equal to 5 is .....

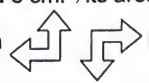
## [b] Represent the following data by a histogram :

Sets	5 -	7 -	9 -	11 -
Frequency	4	12	9	6



## Additional question

Put (✓) for the correct statement and (X) for the incorrect one :

- [a] If :  $x + 2 = 5$  ,  $x \in \mathbb{N}$  , then :  $2x = 6$  ( )
- [b] The isosceles trapezium has two axes of symmetry. ( )
- [c] A rhombus of diagonals length 6 cm. and 5 cm. , its area = 30 cm<sup>2</sup> ( )
- [d] The following geometric transformation  is rotation ( )

## 17 El-Dakahlia Governorate

Maths Supervision for E.L.S.



Answer the following questions :

## 1 Complete :

- [a] The additive neutral element in ( $\mathbb{N}$ ) is ..... , while the multiplicative neutral element in ( $\mathbb{N}$ ) is .....
- [b] The difference between two numbers is 5 , the smaller one is  $x$  , then the greater number is .....
- [c] The area of a triangle is 20 cm<sup>2</sup> and the length of its base is 8 cm. , then the corresponding height to this base is ..... cm.
- [d] The set of natural numbers which are more than 4 and less than 5 is .....

## 2 Choose the correct answer :

- [a] Double the number  $x$  subtracted 7 from it equals .....  
(  $x - 7$  or  $2x - 7$  or  $7x + 2$  or  $14x$  )
- [b]  $(x - 15) \dots (x - 14)$  , where  $x$  is a natural number more than 20  
(  $>$  or  $<$  or  $=$  or  $\geq$  )
- [c] The difference between  $\frac{1}{2}$  circumference of a circle and the perimeter of the semicircle of this circle is .....  
(  $\pi$  or  $r$  or  $2\pi r$  or  $d$  )
- [d]  $x$  is an odd number , then :  $x + 3$  is .....  
( an odd or an even or a prime )

3 [a] Four successive even natural numbers , the greatest number of them is  $x + 13$  , write down these numbers.

[b] Which is greater in area ?

the triangle whose base length is 12 cm. and the corresponding height = 8 cm. or the square whose the length of its diagonal = 8 cm.

4 [a] Using the distribution property to find the value of the following :  
123 × 98

[b] Calculate the circumference of the circle in which its radius length = 14 cm. ( $\pi = \frac{22}{7}$ )

5 The following table shows the marks of 40 pupils in mathematics exam :

Sets	10 –	20 –	30 –	40 –	50 –	Total
Frequency	5	7	12	A	7	40

[a] Find the value of A

[b] Draw the frequency polygon which represent these data.

[c] How many pupils were got less than 30 marks ?

#### Additional question

[a] Find the height of the parallelogram with an area 48 cm<sup>2</sup> and its base length is 8 cm.

[b] Solve the equation :  $3x + 8 = 29$  where  $x \in \mathbb{N}$

### 18 Ismailia Governorate

Directorate of Education  
Mathematics Inspection



Answer the following questions :

1 Complete the following :

[a]  $y \times \dots = \dots \times x$  (..... property)

[b] If :  $X = \{a : a \in \mathbb{N}, a \leq 4\}$ , then :  $X = \dots$

[c] If :  $a = 4$ ,  $b = 3$ , then :  $2 \times a + 5 \times b = \dots$

[d] A circle , its circumference is 66 cm. , then the length of its diameter is ..... cm. ( $\pi = \frac{22}{7}$ )

2 Choose the correct answer :

[a]  $(3 + 6) \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )

[b] A square , its diagonal length is 6 cm. , then its area is ..... cm<sup>2</sup>  
(36 or 18 or 12 or 20)



[c] The expression of 3 is subtracted from two times a number y is .....  
( $2y + 3$  or  $2y - 3$  or  $3y - 2$  or  $3y + 3$ )

[d] Samar is n years old , then Samar's age after 5 years will be ..... years.  
( $n - 5$  or  $n + 5$  or  $5n$  or  $5n - 1$ )

3 By using the properties of addition and multiplication in  $\mathbb{N}$ , find :

[a]  $35 \times 28 + 35 \times 72$  [b]  $76 + 29 + 24 + 21$

4 [a] A triangle , its area is 60 cm<sup>2</sup> and base length is 6 cm. Find its height.

[b] Find the perimeter of the opposite figure ( $\pi = \frac{22}{7}$ )



5 [a] On the coordinate plane , draw the triangle ABC where A (2 , 1) , B (6 , 1) and C (4 , 5)

[b] Represent the following data by a frequency polygon :

Sets	5 –	10 –	15 –	20 –
Frequency	4	7	2	9

#### Additional question

[a] In a coordinate plane , represent the points A (2 , 3) , B (3 , 5) and (5 , 3)  
Find the image of  $\triangle ABC$  by reflection in  $\overline{AC}$

[b] Complete in the same pattern :

(1) 1 000 , 100 , 10 , ..... , .....

(2) 20 , 19 , 17 , 14 , ..... , .....

### 19 Suez Governorate

Maths Inspection



Answer the following questions :

1 Complete :

[a] The area of square =  $\frac{1}{2} \times \dots \times \dots$

[b] The multiplicative neutral element in  $\mathbb{N}$  is .....

[c] The set of natural numbers ( $\mathbb{N}$ ) – the set of odd numbers (O) = .....



[d] The smallest natural number is .....

[e] The circumference of a circle with radius length 10 cm. is .....  $\pi$  cm.

**2 Choose the correct answer :**

[a] The set of even numbers (E) .....  $\mathbb{N}$

( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )

[b] The sum of two numbers A and B is 10 , then : B = .....

(10 - A or A - 10 or A or 10)

[c]  $\frac{\text{The circumference of the circle}}{\text{The diameter length of the circle}} = \dots\dots\dots$

(1 or  $2\pi$  or  $\pi$  or  $\frac{1}{2}\pi$ )

[d] x is an odd number , then x + 3 is ..... number.

(an odd or an even or a prime)

[e]  $(49 \div 8)$  .....  $\mathbb{N}$

( $\subset$  or  $\in$  or  $\not\subset$  or  $\notin$ )

**3 [a] On a 2-dimensional coordinate plane , locate the points :**

A (8 , 2) , B (3 , 2) , C (3 , 6) and D (8 , 6) , then write the name the figure ABCD

[b] Find the area of the triangle of base length 5 cm. and the corresponding height is 6 cm.

**4 [a] Find the circumference of a circle of diameter length 14 cm. ( $\pi = \frac{22}{7}$ )**

[b] Find the area of a square of diagonal length 6 cm.

**5 The following table shows the marks of 35 pupils in math exam :**

The set	10 -	20 -	30 -	40 -	Total
Frequency	8	12	10	5	35

Represent these data by a frequency polygon.

**Additional question**

[a] Find the area of the rhombus whose perimeter is 36 cm. and its height 5.4 cm.

[b] Solve the following equation :  $2x - 5 = 7$  , where  $x \in \mathbb{N}$



**20 Kafr El-Sheikh Governorate**

Fowa Educational Zone  
Zoween E.L.S.



Answer the following questions :

**1 Choose the correct answer :**

[a] If the circumference of a circle is 44 cm. , then its diameter length = ..... cm. ( $\pi = \frac{22}{7}$ ) (14 or 22 or 44 or 66)

[b] The square whose area is  $72 \text{ cm}^2$  , then the length of its diagonal = ..... cm. (15 or 12 or 41 or 144)

[c] Subtract 9 from twice of the number x is ..... ( $\hat{x} - 9$  or  $9 - x$  or  $2(x + 9)$  or  $2x - 9$ )

[d] The multiplicative neutral element in  $\mathbb{N}$  is ..... (0 or 1 or 2 or 5)

[e]  $8 \times 45 \times \dots\dots\dots = 45\,000$  (10 or 20 or 125 or 25)

**2 Complete each of the following :**

[a] The area of the triangle whose base length is 7 cm. and its corresponding height is 4 cm. is .....

[b] If x is an even number , then x + 2 is ..... number.

[c] If :  $7 + \dots\dots\dots = 7$  is called ..... property.

[d]  $\frac{3+6}{5-5} = \dots\dots\dots$

[e] 99 is added to the multiplicative neutral of natural numbers = .....

**3 [a] Write in the listing method :  $X = \{x : x \in \mathbb{N}, 3 \leq x < 5\}$**

, then represent its elements on the number line.

[b] Use the properties of operations in  $\mathbb{N}$  to find the result of each of the following :

(1)  $37 + 75 + 63 + 25$

(2)  $67 \times 125 - 67 \times 25$

**4 [a] Which is greater in area ? a square whose diagonal length is 12 cm. or a triangle whose base length is 10 cm. and height is 9 cm.**

[b] On a coordinate plane , draw the figure ABCD in which A (1 , 1) , B (1 , 3) , C (4 , 3) , D (5 , 1) , then write the name of the figure.

5 [a] Put the suitable relation ( $>$ ,  $=$  or  $<$ ) :

- (1)  $(x - 11) \dots\dots\dots (x - 13)$  where  $x$  is a natural number more than 23  
 (2) The additive neutral in  $\mathbb{N} \dots\dots\dots$  the smallest prime number in  $\mathbb{N}$

[b] Represent these data by a frequency polygon :

Sets	4 -	6 -	8 -	10 -	Total
Frequency	12	8	16	14	50

### Additional question

An employee spends his monthly salary as follows :

1 000 pounds for food , 500 pounds for clothes , 250 pounds for the rent of the flat and 250 pounds for other spending.

Represent these data by a pie graph.

## 21 El-Beheira Governorate

Bandr Kafr El-Dawaar  
Educational Zone



Answer the following questions :

1 Complete :

- [a] The sum of two numbers is 20 , if one of them is  $x$  , then the other = .....  
 [b] The square whose diagonal length is 6 cm. , then its area = .....  $\text{cm}^2$   
 [c] The set of natural numbers less than 5 is .....  
 [d] The triangle whose base length is 5 cm. and its corresponding height is 6 cm. , then its area = .....  $\text{cm}^2$

2 Choose the correct answer :

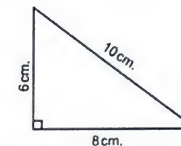
- [a] Twice the number  $x$  subtracted 7 from it = .....  
 ( $x - 7$  or  $2x + 7$  or  $2x - 7$  or  $7 - 2x$ )  
 [b] If  $x$  is an odd number , then  $x + 2$  is ..... number.  
 (an odd or an even or a prime)  
 [c] The circumference of a circle = .....  
 ( $2\pi$  or  $2 \times d$  or  $\pi \times d$  or  $2\pi \times d$ )  
 [d] The product of any two natural numbers .....  $\mathbb{N}$   
 ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )



3 [a] Use the properties of the operations in  $\mathbb{N}$  to find the result of each :

- (1)  $34 \times 1\,001$  (2)  $892 + 526 + 108 + 474$

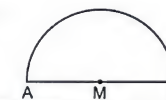
[b] Calculate the area of the opposite triangle.



4 [a] If the age of a man now is  $x$  years where  $x \in \mathbb{N}$  , find :

- (1) The age of the man after 7 years.  
 (2) The age of the man since 5 years.

[b] Calculate the perimeter of the opposite figure where  $AB = 21 \text{ cm}$ . ( $\pi = \frac{22}{7}$ )



5 [a] Which is greater in area ?

A triangle whose base length is 12 cm. and its corresponding height is 8 cm. or a square of side length 7 cm.

[b] Represent these data using a histogram :

Sets	10 -	20 -	30 -	40 -	Total
Frequency	6	12	8	4	30

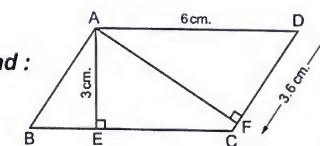
### Additional question

In the opposite figure :

ABCD is a parallelogram in which

$AD = 6 \text{ cm}$  ,  $AE = 3 \text{ cm}$  ,  $CD = 3.6 \text{ cm}$ . Find :

- (1) The area of the parallelogram ABCD  
 (2) The length of  $\overline{AF}$



## 22 El-Fayoum Governorate

West Educational Zone  
Salam Language School



Answer the following questions :

1 Choose the correct answer :

- [a]  $(3 + 9) \dots\dots\dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )



## Final Examinations

- [b] The triangle whose base length is 8 cm. and its corresponding height is 5 cm. , then its area = .....  $\text{cm}^2$  ( 9 or 40 or 8 or 20 )
- [c] The square whose diagonal length is 8 cm. , its area = .....  $\text{cm}^2$  ( 64 or 32 or 16 or 24 )
- [d] If 9 is subtracted from a number , the result is 23 , then : ..... (  $9x = 23$  or  $x - 9 = 23$  or  $x + 9 = 23$  or  $23 - x = 9$  )

### 2 Complete :

- [a]  $32 + (59 + \dots) = (32 + 68) + \dots$
- [b] The square whose side length is 10 cm. , its area = .....  $\text{cm}^2$
- [c] ..... is the additive neutral element in  $\mathbb{N}$
- [d]  $5 \times 14 = 14 \times x$  , then :  $x = \dots$

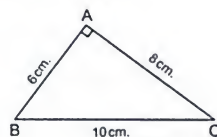
### 3 [a] Use the commutative and associative properties to find with steps :

(1)  $28 + 59 + 72$  (2)  $4 \times 33 \times 25$

- [b] Write the following set in the listing method and represent it on the number line :  $M = \{a : a \in \mathbb{N}, 2 \leq a \leq 5\}$

### 4 [a] Find the circumference of a circle whose diameter length is 14 cm. ( $\pi = \frac{22}{7}$ )

- [b] ABC is a right-angled triangle at A ,  
AC = 8 cm. , AB = 6 cm. and BC = 10 cm.  
Find the area of :  $\triangle ABC$



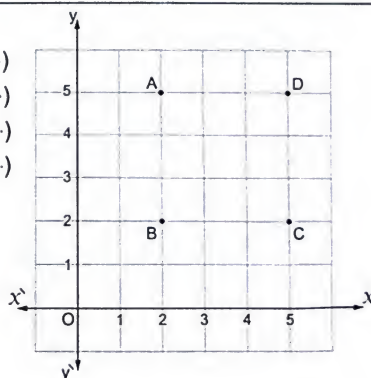
### 5 [a] From the opposite figure :

Complete : A (..... , .....)

B (..... , .....)

C (..... , .....)

D (..... , .....)



## Final Examinations



- [b] The following table shows the marks of 50 pupils in exam of mathematics in one month :

Sets	10 -	20 -	30 -	40 -	Total
Frequency	10	12	18	10	50

Draw histogram which represent these data.

### Additional question

- [a] Graph the figure ABCD where A (2 , 7) , B (3 , 4) , C (8 , 4) and D (7 , 7)  
What is the name of the figure ABCD ?
- [b] Solve the equation :  $2x - 4 = 12$  ,  $x \in \mathbb{N}$

## 23

### Beni Suef Governorate

El-Shoruk Exp. Lang. School



Answer the following questions :

### 1 Complete :

- [a]  $\frac{0}{7}$  .....  $\mathbb{N}$  [b]  $a + b = c$  (..... property)
- [c] For  $a \in \mathbb{N}$  ,  $b \in \mathbb{N}$  , then :  $a \times b$  .....  $\mathbb{N}$
- [d] The set of natural numbers less than 4 is { ..... }

### 2 Evaluate using the properties of multiplication and addition in $\mathbb{N}$ :

- [a]  $125 \times 19 \times 8$  [b]  $56 \times 1\,002$
- [c]  $257 + 51 + 49$

### 3 Choose the correct answer :

- [a] The area of a triangle whose base length is 5 cm. and the corresponding height is 6 cm. is .....  $\text{cm}^2$ . ( 30 or 15 or 25 or 36 )
- [b] If the diameter length in a circle is 7 cm. , then the circumference is ..... cm. ( $\pi = \frac{22}{7}$ ) ( 3.5 or 7 or 22 or 44 )
- [c] The area of a square whose diagonal length is 6 cm. is .....  $\text{cm}^2$  ( 18 or 36 or 12 or 6 )
- [d] The sum of two numbers a and b is 10 , then :  $b = \dots$  (  $10 - a$  or  $a - 10$  or  $10 + a$  or  $b - 10$  )

## Final Examinations

### 4 Find the equation :

- [a] Add 3 to the double of the number  $x$   
 [b] Subtract 8 from a number  
 [c] The perimeter of a square whose side length is  $L$

### 5 The following table shows the record temperatures in 40 cities on a day :

Temperatures	20 –	22 –	24 –	26 –	28 –	Total
Number of cities	7	9	11	8	5	40

Draw each of the histogram and the frequency polygon.

### Additional question

- [a] If the area of a rhombus is  $30 \text{ cm}^2$  and its side length is 6 cm, then find its height.  
 [b] Complete in the same pattern :  
 (1) 5, 15, 25, .....  
 (2) 1, 1, 2, 3, 5, 8, .....

## 24 El-Menia Governorate

El-Menia Educational Zone

Answer the following questions :

### 1 Complete :

- [a] The least natural number is .....  
 [b] The sum of a number  $x$  and 3 is .....  
 [c] The area of the triangle =  $\frac{1}{2} \times \dots \times \dots$   
 [d] The additive identity element is .....  
 [e]  $17 + \dots = \dots + 17 = 17$

### 2 Choose the correct answer :

- [a]  $(5 - 7) \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\supset$ )  
 [b] The area of the square of side length 5 cm. is .....  $\text{cm}^2$   
 (20 or 5 or 25 or 15)  
 [c]  $E \cap O = \dots$  ( $O$  or  $\mathbb{N}$  or  $E$  or  $\emptyset$ )  
 [d] Twice of a number  $y$  is .....  
 ( $2 + y$  or  $2y$  or  $y - 2$  or  $y + 2$ )

## Final Examinations

[e] The multiplicative neutral element in  $\mathbb{N}$  is .....

(0 or 1 or  $\emptyset$  or 2)

### 3 [a] Use the commutative and associative properties to find the value of each of the following :

(1)  $125 + 254 + 375 + 246$

(2)  $4 \times 65 \times 25$

[b] Find the area of square whose diagonal length is 10 cm.

### 4 [a] On the coordinate plane, locate the following points A (3, 5), B (6, 5) and C (3, 2), then complete :

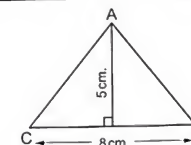
(1) The length of  $\overline{AC}$  = ..... units.

(2) The length of  $\overline{AB}$  = ..... units.

[b] Find the circumference of a circle whose diameter length is 14 cm. ( $\pi = \frac{22}{7}$ )

### 5 [a] In the opposite figure :

Find the area of the triangle ABC



[b] The following table shows the frequency distribution of the number of working hours of 50 workers :

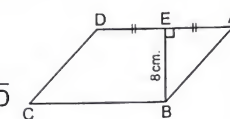
Sets	4 –	6 –	8 –	10 –	Total
Frequency	12	8	16	14	50

Draw the frequency polygon which represents these data.

### Additional question

In the opposite figure :

The area of the parallelogram ABCD is  $96 \text{ cm}^2$ ,  $BE = 8 \text{ cm}$ ,  $\overline{BE} \perp \overline{AD}$  and E is the midpoint of  $\overline{AD}$ . Calculate the area of the figure EBCD





## 25 Assiut Governorate

Manfalout Educational Administration  
Gamal Abd El-Nasser E.L.S.

Answer the following questions :

## 1 Choose the correct answer :

- [a] The square whose diagonal length is 8 cm. , its area = ..... cm<sup>2</sup>  
( 64 or 32 or 16 or 8 )
- [b] If :  $X = \{x : x \in \mathbb{N}, 3 \leq x < 5\}$  , then :  $x \in$  .....  
( {4} or {3} or {3, 4} or {4, 5} )
- [c] If O is the set of odd numbers , then :  $O \dots \mathbb{N}$   
(  $\subset$  or  $\in$  or  $\not\subset$  or  $\notin$  )
- [d]  $(49 \div 8) \dots \mathbb{N}$  (  $\subset$  or  $\in$  or  $\not\subset$  or  $\notin$  )

## 2 Complete the following :

- [a] The circumference of a circle with radius length 10 cm. is .....  $\pi$  cm.
- [b] For any natural numbers a , b and c where  $(a \times b) \times c = a \times (b \times c)$  is called ..... property.
- [c] The multiplicative neutral element in  $\mathbb{N}$  is .....
- [d] The set of even numbers (E) – the set of odd numbers (O) = .....

3 [a] If the age of a man now is x years where  $x \in \mathbb{N}$  , find :

- (1) The age of the man after 7 years.
- (2) The age of the man since 10 years.

[b] Using the properties of commutative , distributive and associative , find the value of each of the following :

- (1)  $8 \times 137 \times 125$  (2)  $28 + 59 + 72$

## 4 [a] The triangle whose base length is 5 cm. and the corresponding height of it is 6 cm. , find its area.

[b] Find the circumference of a circle whose diameter length is 14 cm. ( $\pi = \frac{22}{7}$ )

## 5 The following table is a frequency distribution for the working hours of 50 workers , graph these data using the frequency polygon :

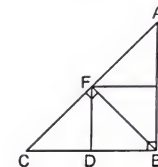
Sets	2 –	4 –	6 –	8 –	10 –	Total
Frequency	8	9	15	16	2	50



## Additional question

[a] In the opposite figure , complete :

- (1)  $\triangle BEF$  is the image of  $\triangle AEF$   
by reflection in .....
- (2)  $\triangle BDF$  is the image of  $\triangle CDF$   
by reflection in .....

[b] Solve each of the following equations : (1)  $\frac{1}{2}x = 7$  (2)  $10 - x = 4$ 

## 26 Souhag Governorate

Maths Inspection



Answer the following questions :

## 1 Complete the following :

- [a] The additive neutral element in  $(\mathbb{N})$  is ..... while the multiplicative neutral element in  $(\mathbb{N})$  is .....
- [b] The side length of a square is 10 cm. , then its area = ..... cm<sup>2</sup>
- [c] The area of the triangle =  $\frac{1}{2} \times$  .....  $\times$  .....
- [d] If :  $86 \times 15 = 86 \times x + 86 \times 10$  , then :  $x =$  .....

## 2 Choose the correct answer from these between brackets :

- [a]  $75 + 89 = 89 +$  ..... ( 75 or 100 or 89 or 57 )
- [b] The area of a triangle whose base length is 5 cm. and the corresponding height is 6 cm. is ..... cm<sup>2</sup> ( 30 or 15 or 25 or 36 )
- [c] Subtract 3 from twice the number  $x =$  .....  
(  $x - 3$  or  $2x + 3$  or  $2x - 3$  or  $x + 4$  )
- [d] The diameter length of the circle whose circumference is 88 cm. = ..... cm. ( $\pi = \frac{22}{7}$ ) ( 28 or 14 or 7 or 21 )

## 3 Use the properties of operations to find the result of :

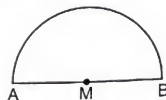
- [a]  $38 + 47 + 62 + 53$  [b]  $8 \times 37 \times 125$

## 4 [a] The diagonal length of a square is 6 cm. Find its area.

[b] Find the circumference of a circle if its diameter length is 7 cm. ( $\pi = \frac{22}{7}$ )

**5 [a] In the opposite figure :**

The length of the diameter  $\overline{AB}$  of a semicircle is 14 cm.



Find the perimeter of the opposite figure ( $\pi = \frac{22}{7}$ )

[b] The following table shows the marks of 35 pupils in exam of mathematics in one month where the full mark is 35 marks :

Sets	10 -	20 -	30 -	40 -	Total
Frequency	8	12	10	5	35

Draw the histogram and the frequency polygon which represent these data.

**Additional question**

Draw the figure ABCD in the coordinate plane where A (1, 2), B (1, 5), C (4, 5) and D (4, 2)

[a] What is the name of the figure ABCD ?

[b] How many lines of symmetry of this figure ?

**27 Qena Governorate**

Mathe Inspection



Answer the following questions :

**1 Complete :**

[a] The smallest counting number is .....

[b] The additive identity element in  $\mathbb{N}$  is .....

[c] The symbolic expression of "9 more than a number" is .....

[d]  $(45 \times 32) \times 81 = 45 \times (\dots \times 81)$  (..... property)

[e]  $E \cap P = \dots$

**2 Choose the correct answer :**

[a] If:  $X = \{x : x \in \mathbb{N}, x \leq 1\}$ , then:  $X = \dots$

( $\{0\}$  or  $\{1\}$  or  $\{0, 1\}$  or  $\{1, 2\}$ )

[b] If the sum of two numbers is 10 and one of them is  $x$ , then the other is ..... ( $10 + x$  or  $10 - x$  or  $x - 10$  or  $10x$ )

[c]  $\frac{7}{0} = \dots$  (0 or 1 or 7 or meaningless)



[d]  $\{5, 2.3\} \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )

[e] If the circumference of a circle =  $5\pi$  cm., then the radius length = ..... cm. (15.7 or 10 or 5 or 2.5)

**3 [a] Find the area of the triangle whose base length is 8 cm. and its corresponding height is 10 cm.**

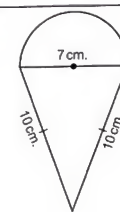
[b] Use the properties of operations in  $\mathbb{N}$  to find the result of each of the following :

(1)  $78 + 49 + 22 + 51$

(2)  $587 \times 1001$

**4 [a] Find the perimeter of the opposite figure.**

( $\pi = \frac{22}{7}$ )



[b] Which is greater in area ?

a square of side length 7 cm. or

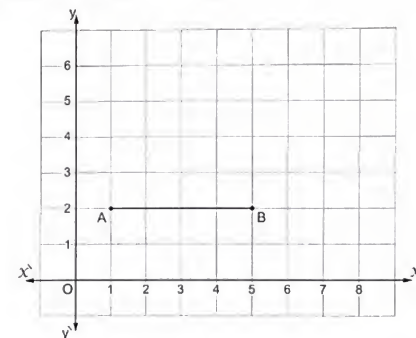
a square its diagonal length is 10 cm.

**5 [a] By using the opposite figure, complete :**

(1) A (....., .....)

(2) B (....., .....)

(3) AB = ..... units



[b] Use the following frequency table to draw the frequency polygon :

Sets	2 -	4 -	6 -	8 -
Frequency	50	30	40	10

**Additional question**

[a] Find the midpoint of  $\overline{AB}$  if A (0, 4) and B (8, 4)

[b] Solve the equation:  $2x - 7 = 5$  where  $x \in \mathbb{N}$



## 28 Aswan Governorate

Eng.M.M.  
Yakoub Language School

Answer the following questions :

## 1 Complete :

[a] Area of a square =  $\frac{1}{2} \times \dots \times \dots$

[b]  $36 + 19 = \dots + 36$

[c] If  $x$  is an even number , then  $x + 2$  is ..... number.

[d]  $19 \times (25 + \dots) = 19 \times 25 + 19 \times 75$

## 2 Choose the correct answer :

[a] The identity element of adding in  $\mathbb{N}$  is .....

(0 or 1 or 2 or 3)

[b]  $\frac{3}{5} \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\supset$ )

[c]  $0 + 12 = \dots$  (12 or 0 or 1)

[d] The smallest natural number is .....

(0 or 1 or 2 or 3)

3 [a] The base length of a triangle is 9 cm. and its height is 6 cm.  
Find its area.[b] If the age of a man is  $x$  years , then find his age after 5 years.4 [a] The diameter length of a circle is 21 cm. , find the circumference  
of the circle ( $\pi = \frac{22}{7}$ )[b] Use properties of addition in  $\mathbb{N}$  to find the value of :  $48 + 97 + 52$ 

## 5

Sets	5 -	10 -	15 -	20 -
Frequency	4	12	9	5

Represent these data by a histogram.

## Additional question

[a] In the cartesian coordinate plane , draw the figure ABCD where  
 $A(8, 5)$  ,  $B(8, 2)$  ,  $C(5, 2)$  and  $D(5, 7)$  , if  $\overline{CD}$  is the axis of  
reflection of the figure ABCD , draw the image of the figure ABCD

[b] Solve each of the following equations :

(1)  $x + 7 = 19$  ,  $x \in \mathbb{N}$

(2)  $3x = 21$  ,  $x \in \mathbb{N}$



## 29 South Sinai Governorate Tour Sinai Educational Zone



Answer the following questions :

## 1 Complete the following :

[a] The smallest natural number is .....

[b]  $75 + 89 = 89 + 75$  (..... property)

[c] The additive identity in  $\mathbb{N}$  is ..... but the multiplicative identity in  $\mathbb{N}$   
is .....[d] The area of the square =  $\frac{1}{2}$  the length of its diagonal  $\times$  .....

## 2 Choose the correct answer from those between brackets :

[a]  $(3 + 9) \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\supset$ )[b] Subtract 7 from the number  $x = \dots$   
( $x - 7$  or  $2x - 7$  or  $7x + 2$  or  $14x$ )[c] If we multiply the number  $x$  by 7 , then we subtract from the result 3 ,  
we shall get .....(  $7x + 3$  or  $3x + 7$  or  $7x - 3$  or  $x - 21$  )[d] The side length of a square is  $L$  , then its perimeter  $P = \dots$ (  $4L$  or  $L + 4$  or  $L - 4$  or  $\frac{1}{4}L$  )

3 [a] Form an equation : A number if added to it 7 , the result is 15

[b] Find the product using commutative and associative properties  
in  $\mathbb{N}$  (state the property used) :  $2 \times 47 \times 5$ 

4 [a] Find the circumference of a circle with diameter length 14 cm.

( $\pi = \frac{22}{7}$ )[b] Find the area of the triangle in which the length of its base is 12 cm.  
and its corresponding height is 5 cm.

## 5 [a] Complete :

(a) Area of a triangle =  $\frac{1}{2} \times \dots \times \dots$

(b) Circumference of the circle =  $\dots \times \dots$

[b] The following table shows the marks of 50 pupils in exam of mathematics in one of months where the full mark is 50 marks :

Sets	10 –	20 –	30 –	40 –	Total
Frequency	10	12	18	10	50

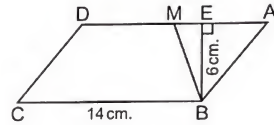
Draw the frequency polygon which represent these data.

### Additional question

In the opposite figure :

ABCD is a parallelogram in which  $BC = 14$  cm. ,  $BE = 6$  cm. and M is the midpoint of  $\overline{AD}$  , find :

- The length of  $\overline{AD}$  and  $\overline{AM}$
- The area of parallelogram ABCD
- The area of  $\triangle ABM$
- The area of the figure MBCD



## 30 Matrouh Governorate

Maths Inspection



Answer the following questions :

### 1 Complete the following :

- The smallest natural number is .....
- Add 6 to the number  $x$  , the symbolic expression is .....
- $213 + 57 = 57 + \dots$
- The circumference of a circle = .....  $\times$  the diameter length

### 2 Choose the correct answer :

- $2 \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\supset$ )
- Area of the triangle = ..... the length of its base  $\times$  its corresponding height ( $\frac{1}{4}$  or  $\frac{1}{2}$  or  $\frac{1}{3}$  or  $\frac{1}{5}$ )
- The multiplicative neutral element in  $\mathbb{N}$  is ..... (zero or 1 or 2 or 3)
- An odd number + an even number = ..... number. (an even or an odd or a prime)



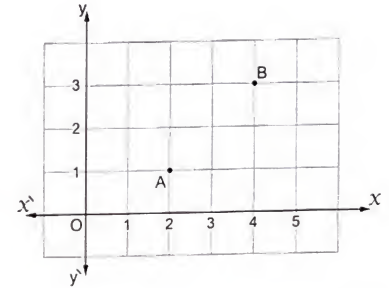
### 3 [a] Use the distribution property to find the value of : $45 \times 99$

[b] Represent on a number line the set of natural number less than 4

### 4 [a] The diagonal length of a square is 6 cm. Find its area.

[b] From the coordinate plane illustrated in the opposite figure , complete :

- A ( ..... , ..... )
- B ( ..... , ..... )



### 5 [a] Soheer saved 14 pounds , she bought 3 notebooks for $x$ pounds each , the remainder with her is 8 pounds.

Choose the equation that represents this situation :

- $14 + 3x = 8$
- $8 - 3x = 14$
- $3x + 8 = 14$
- $3x - 14 = 8$

[b] The following table shows the marks of 50 pupils in an exam of maths in one of months where the full mark is 50 marks :

Sets	10 –	20 –	30 –	40 –	Total
Frequency	10	12	18	10	50

Represent these data by the histogram and the frequency polygon.

### Additional question

- Draw on the coordinates plane the triangle ABC where A ( 1 , 0 ) , B ( 2 , 2 ) and C ( 2 , 5 ) , then draw its image by reflection in  $\overleftrightarrow{BC}$
- Solve the equation :  $5x + 1 = 11$  where  $x \in \mathbb{N}$